



# San Diego County Respiratory Virus Surveillance Report

Prepared by Epidemiology and Immunization Services Branch

[www.sdepi.org](http://www.sdepi.org)

December 22, 2022

## COVID-19

Cases  
115,991

Deaths  
203

Outbreaks\*  
240

7/3/2022 – 12/17/2022

## Influenza

Cases  
18,439

Deaths  
27

Outbreaks\*  
17

7/3/2022 – 12/17/2022

\*In residential congregate settings

## Report Content Links

- Page 2: [COVID-19 and Influenza Fiscal Year-to-Date Overview](#)
- Page 3: [COVID-19 and Influenza Cases by Episode Week, Fiscal Year-to-Date](#)
- Page 4: [Cumulative COVID-19 and Influenza Cases](#)
- Page 5: [COVID-19 and Influenza Case Trends Over Time](#)
- Page 6: [Emergency Department Data: Covid-like Illness and Influenza-like Illness](#)
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Please visit the COVID-19 data dashboards on the County of San Diego COVID-19 [website](#). Additional COVID-19 data are available there in a more interactive format.

Most data in this report are presented by fiscal year, which runs July 1–June 30. Because data are also presented by CDC disease week, which runs Sunday–Saturday, we start the data for 2022-23 on July 3, 2022.

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# Respiratory Virus Surveillance Report

Data through 12/17/2022



## COVID-19 and Influenza Fiscal Year-to-Date Overview

Figure 1.1. San Diego County COVID-19\* Cases by Episode Month

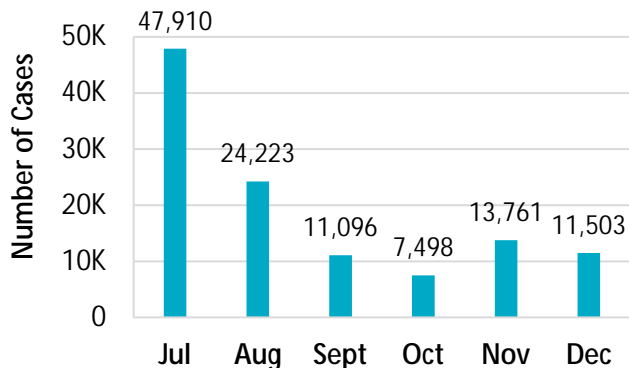


Figure 1.2. San Diego County Influenza Cases by Episode Month

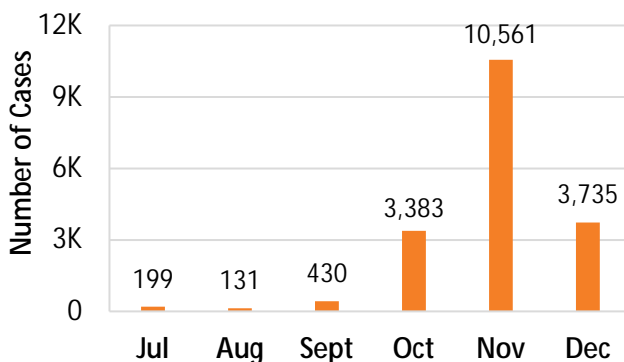


Table 1. Respiratory Surveillance Indicators

Indicator	2022-23 Fiscal Year			2021-22 Fiscal Year			Prior 5-Year Average <sup>†</sup>		
	Week 50	Total To Date	Week 49	Week 50	Total To Date	FY Total	Week 50	Total To Date	FY Total
% P&I deaths <sup>‡</sup>	9%		8%	9%			8%		
<b>COVID-19</b>									
Cases <sup>*</sup>	4,478	115,991	4,893	6,555	118,323	556,829			
Outbreaks <sup>§</sup>	0	240	12	17	174	604			
Deaths <sup>  </sup>	24	203	15	34	685	1,615			
% ED CLI <sup>**</sup>	5%		5%	3%					
<b>INFLUENZA</b>									
Cases	1,141	18,439	1,609	192	888	4,192	386	1,201	11,253
Outbreaks <sup>§</sup>	0	17	0	0	0	1	2	5	40
Deaths <sup>  </sup>	7	27	7	0	1	8	1	4	108
% ED ILI <sup>††</sup>	6%		7%	3%			4%		

FY 2022-23 is 7/3/2022- 7/1/2023, Weeks 27-26. Previous weeks' case counts or percentages may change due to delayed processing or reporting.

\*Confirmed COVID-19 cases only.

<sup>†</sup> Includes FYs 2017-18, 2018-19, 2019-20, 2020-21, and 2021-22.

<sup>‡</sup> The percentage of deaths registered with pneumonia or influenza listed as a cause of death.

<sup>§</sup> See page 18 for outbreak definitions. Includes only outbreaks occurring in skilled nursing facilities and other residential congregate settings.

<sup>||</sup> Current FY deaths are shown by week of report; prior FY deaths are shown by week of death.

\*\*COVID-like Illness (CLI) includes fever and cough, shortness of breath, or difficulty breathing OR coronavirus diagnostic codes.

†† Influenza-like illness (ILI) includes fever plus cough and/or sore throat.

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## COVID-19 and Influenza Cases by Episode Week, Fiscal Year-to-Date

Figure 2.1. San Diego County COVID-19 Confirmed and Probable Cases by CDC Episode Week\*, 2022-23 Fiscal Year-to-Date (N=129,985)

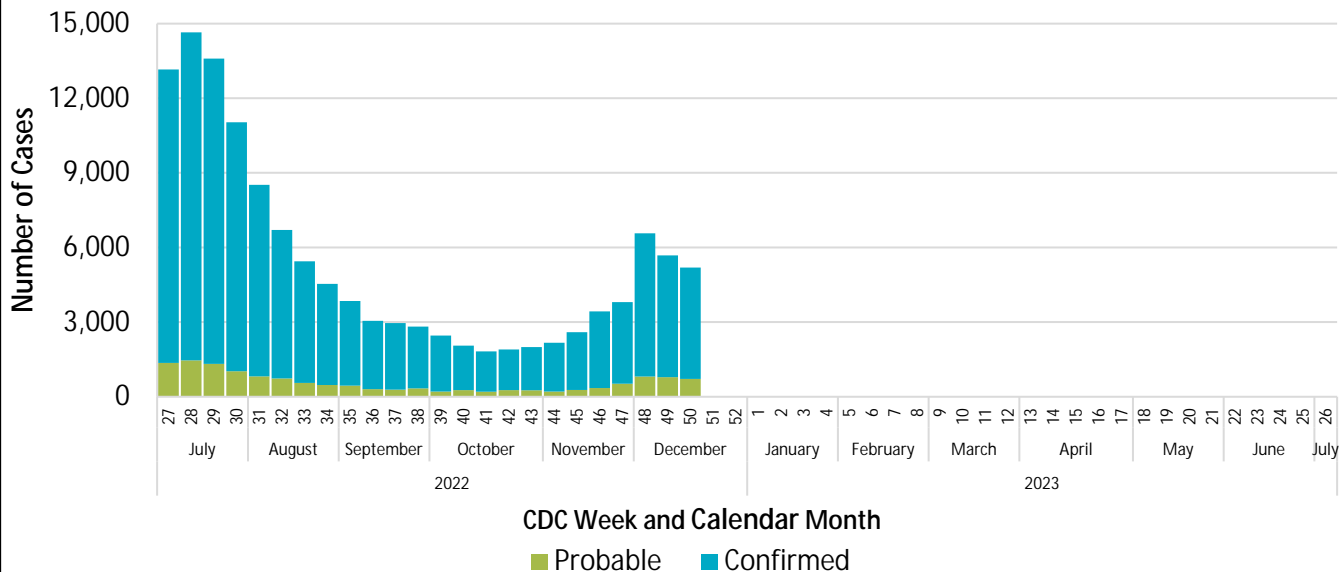
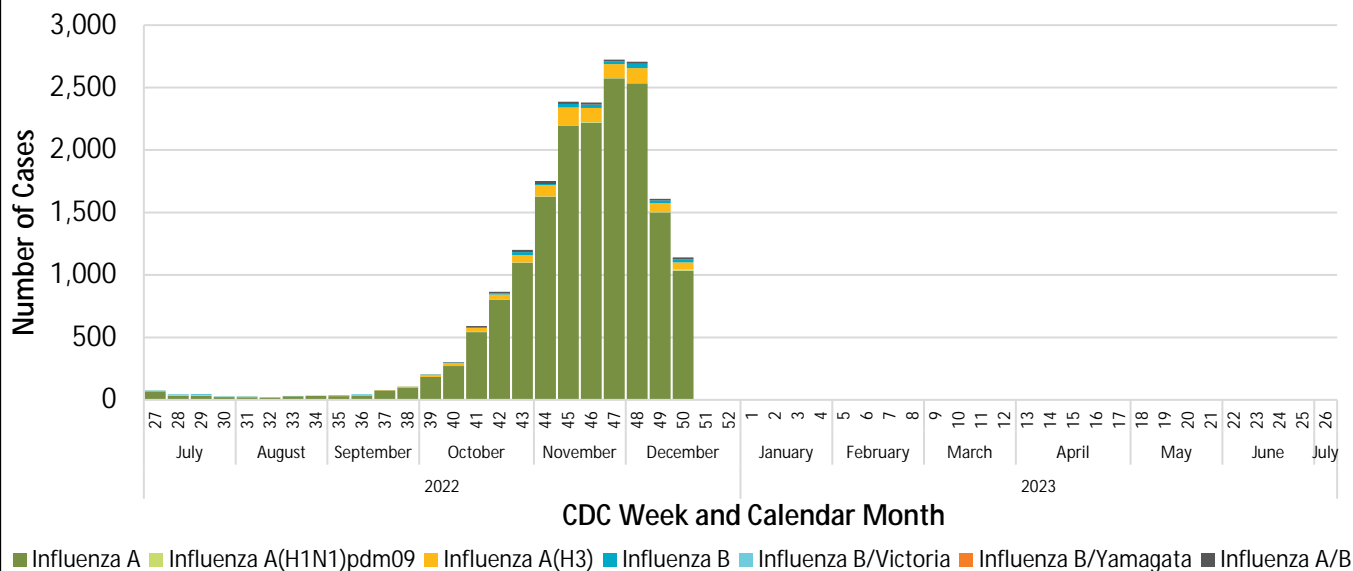


Figure 2.2. San Diego County Influenza Cases by Type and CDC Episode Week\*, 2022-23 Fiscal Year-to-Date (N=18,439)

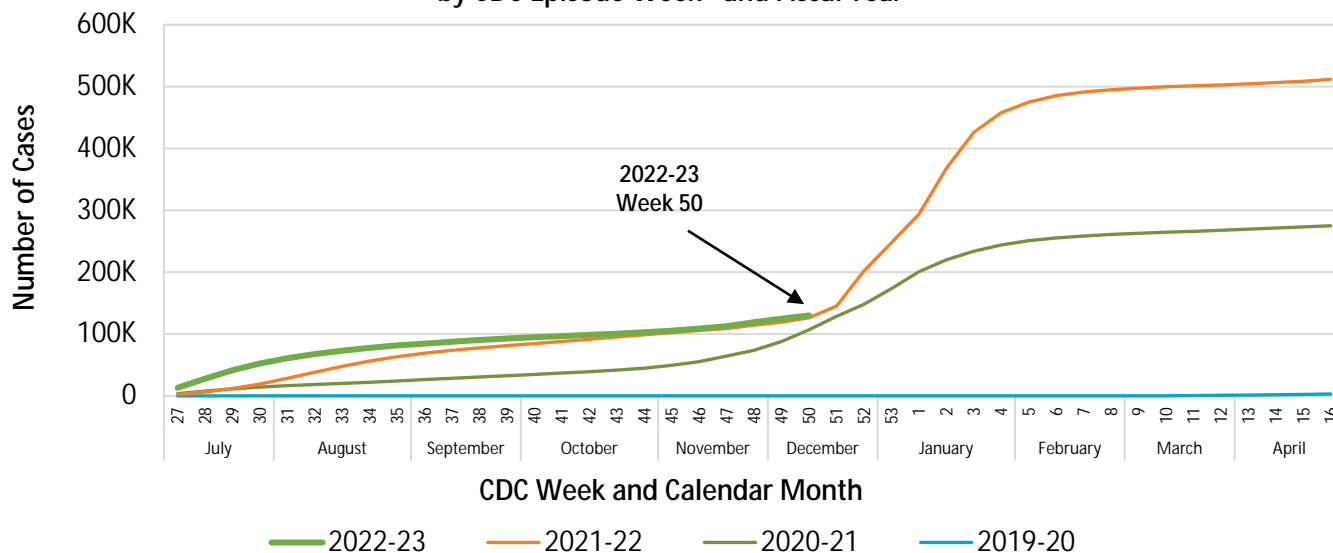


\*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported. Data for the most recent week may be incomplete.



## Cumulative COVID-19 and Influenza Cases

Figure 3.1. Cumulative COVID-19 Confirmed and Probable Cases by CDC Episode Week\* and Fiscal Year



# Respiratory Virus Surveillance Report



## COVID-19 and Influenza Case Trends Over Time

Figure 4.1. COVID-19 Confirmed and Probable Cases by CDC Episode Week\*, San Diego County Residents, N=1,033,755

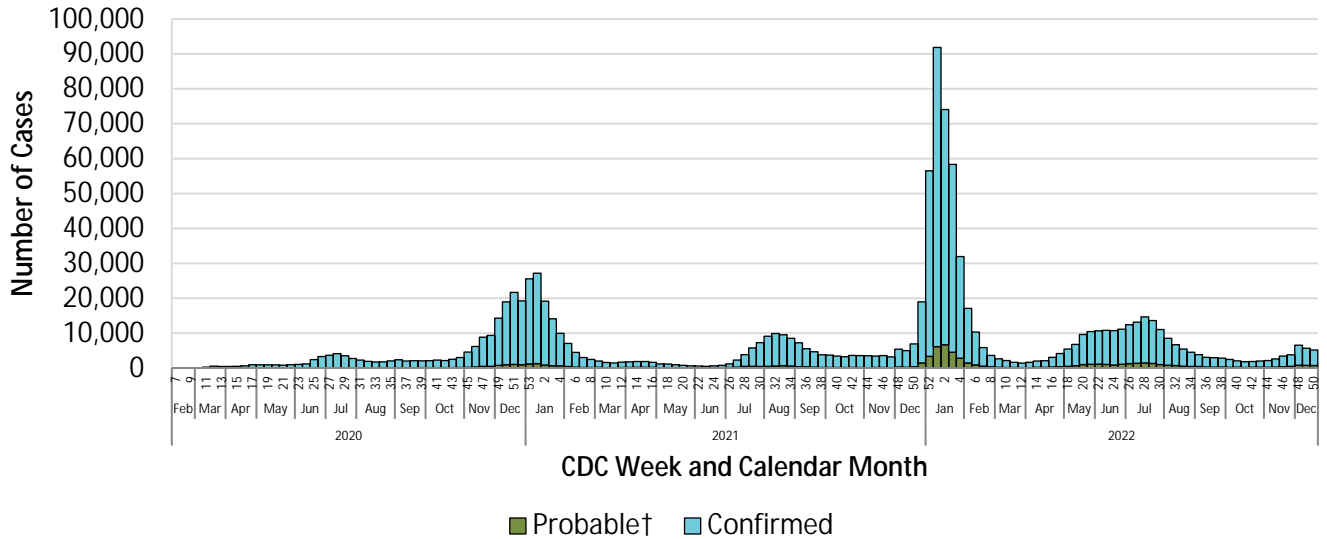
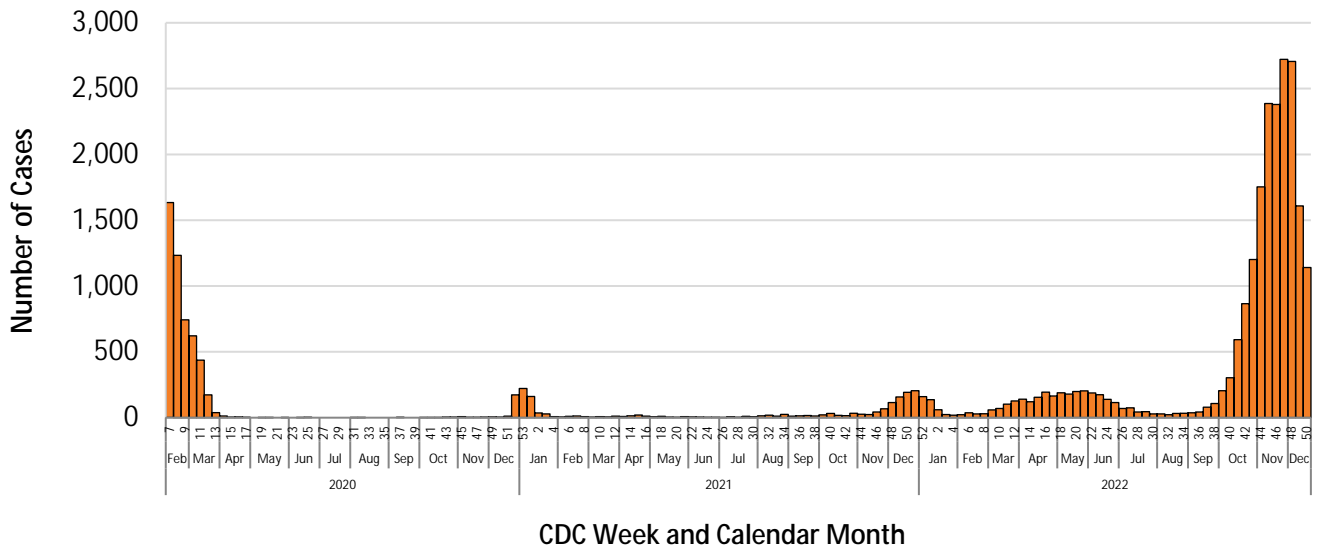


Figure 4.2. Influenza Confirmed Cases by CDC Episode Week\*, San Diego County Residents, N=28,390



\*Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported. Data for the most recent week may be incomplete.

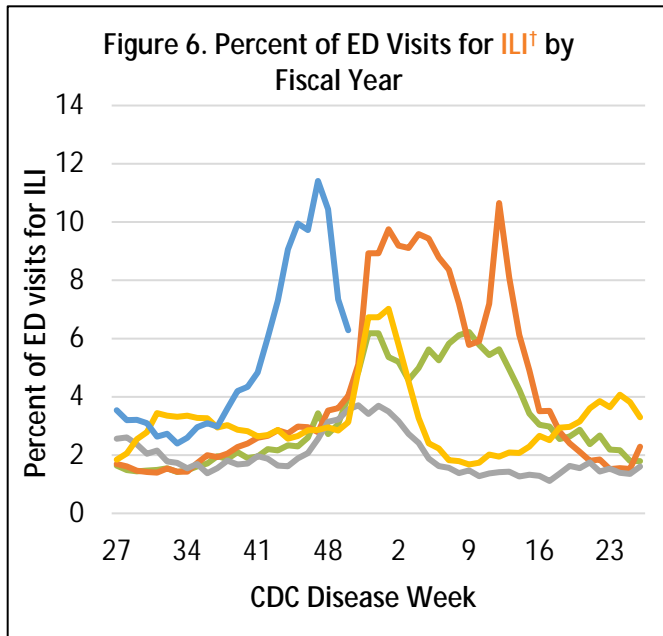
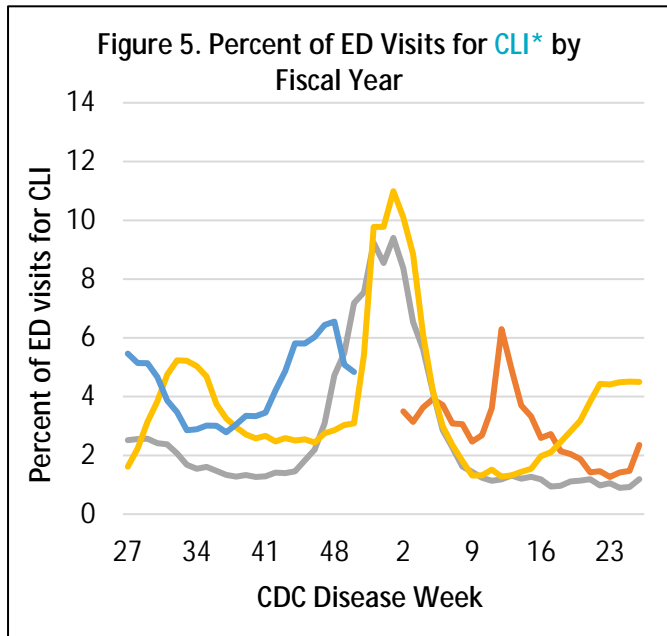
† Probable COVID-19 cases are antigen positive tests received since August 1, 2020.

# Respiratory Virus Surveillance Report

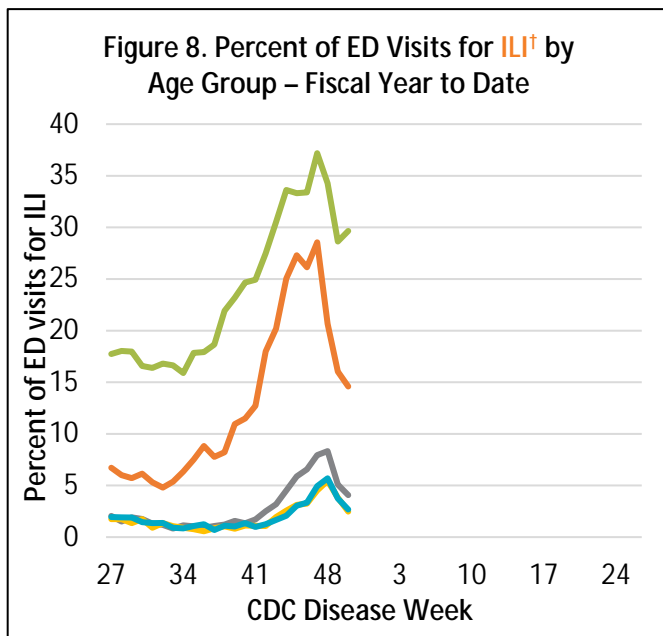
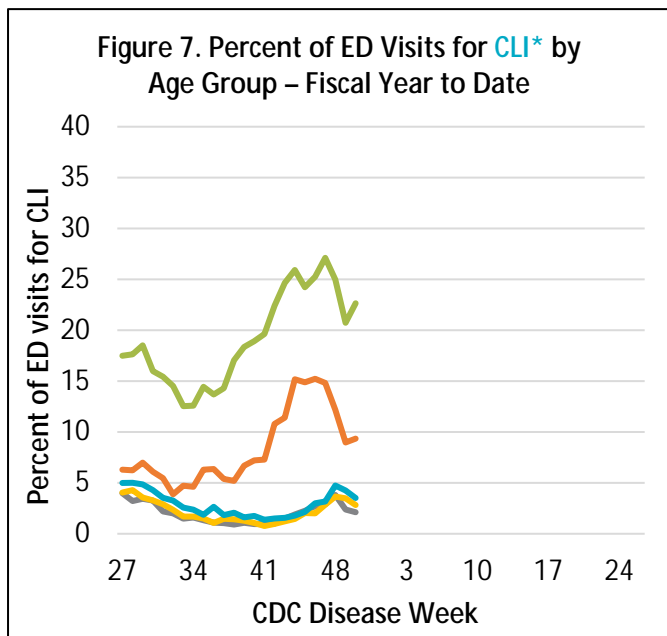


## Emergency Department Data: COVID-like Illness and Influenza-like Illness

Fiscal Year — 2018-2019 — 2019-2020 — 2020-2021 — 2021-2022 — 2022-2023



Age Group — 0-4 years — 5-17 years — 18-49 years — 50-64 years — 65+ years



\*COVID-like Illness (CLI) includes fever and cough, shortness of breath, or difficulty breathing OR coronavirus diagnostic codes.

†Influenza-like illness (ILI) includes fever plus cough and/or sore throat.

Data through  
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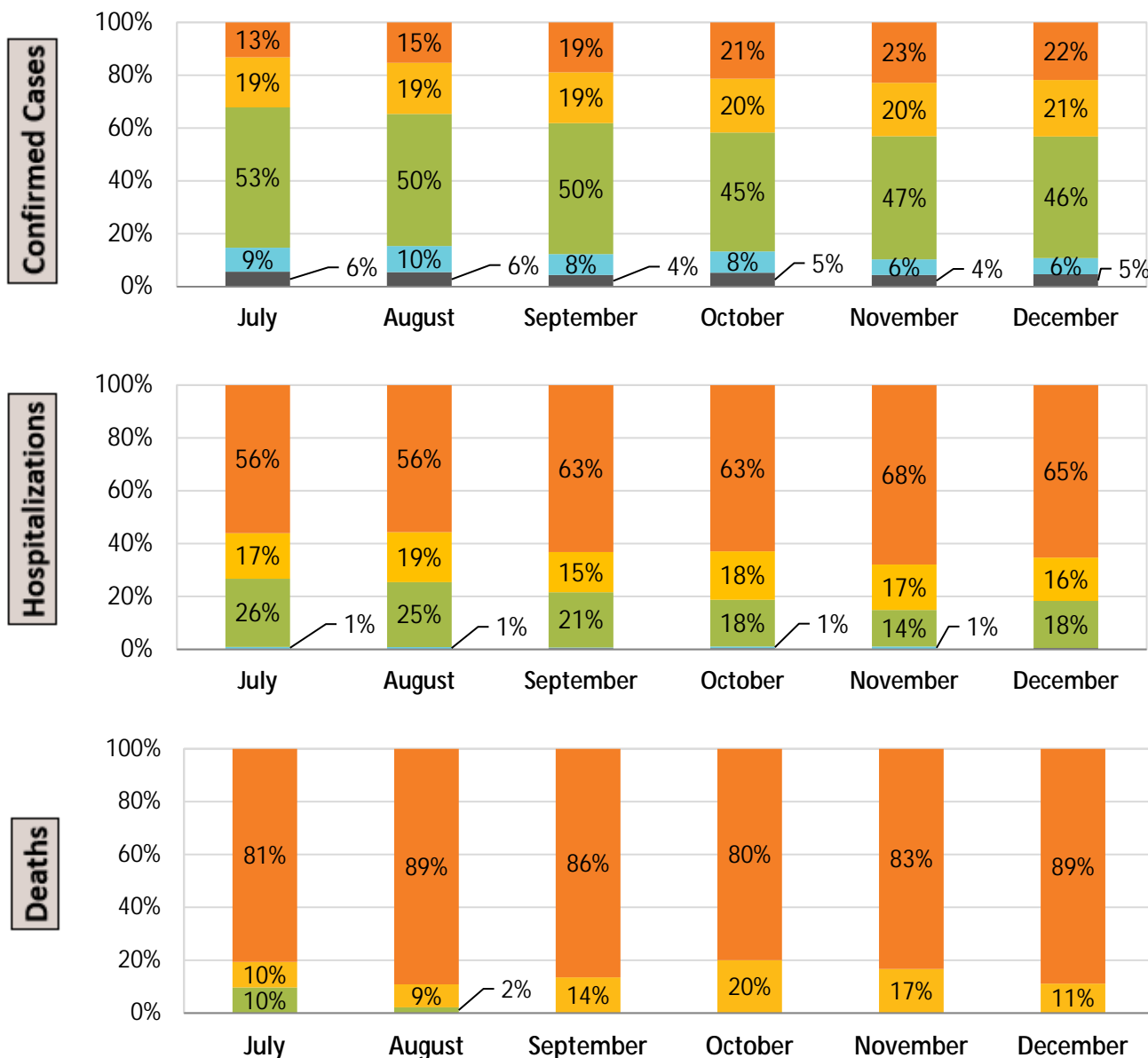
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# Respiratory Virus Surveillance Report



Figures 9-11. Monthly COVID-19 Cases, Hospitalizations, and Deaths by Age

■ 0-4 yrs ■ 5-17 yrs ■ 18-49 yrs ■ 50-64 yrs ■ 65+ yrs



COVID-19 cases are grouped by episode date, hospitalizations are grouped by date admitted, and deaths are grouped by date of death. Episode date is the earliest available of symptom onset date, specimen collection date, date of death, date reported. Date admitted is not known for all hospitalizations; information may be updated as case investigations proceed.

# Respiratory Virus Surveillance Report



## Influenza Case Counts by Age

■ 0-4 yrs ■ 5-17 yrs ■ 18-49 yrs ■ 50-64 yrs ■ 65+ yrs

Figure 12. Proportion of Influenza Cases by Age Group and Fiscal Year

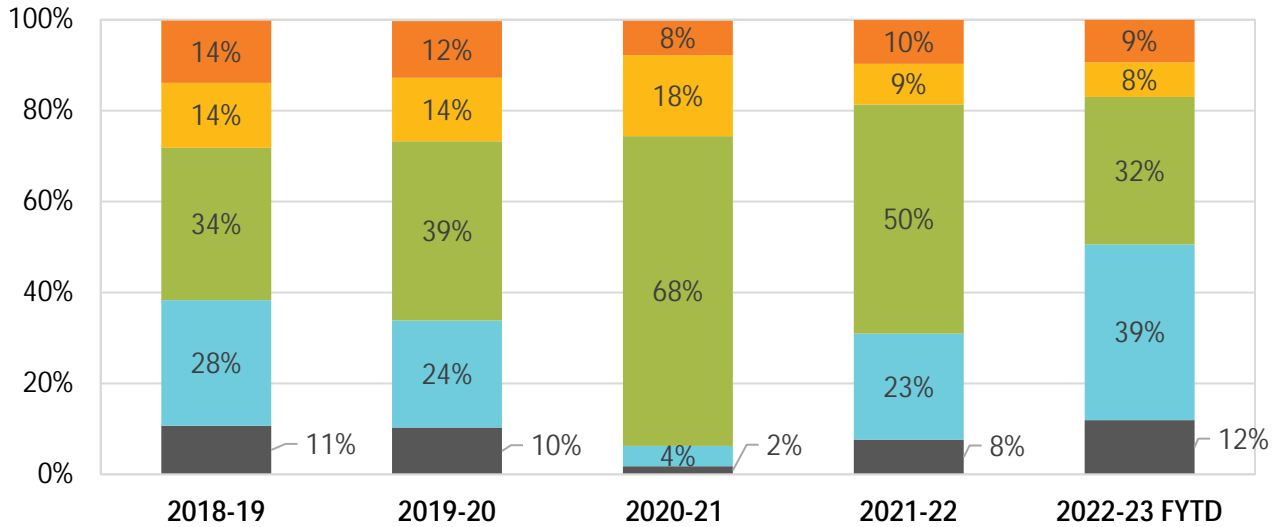
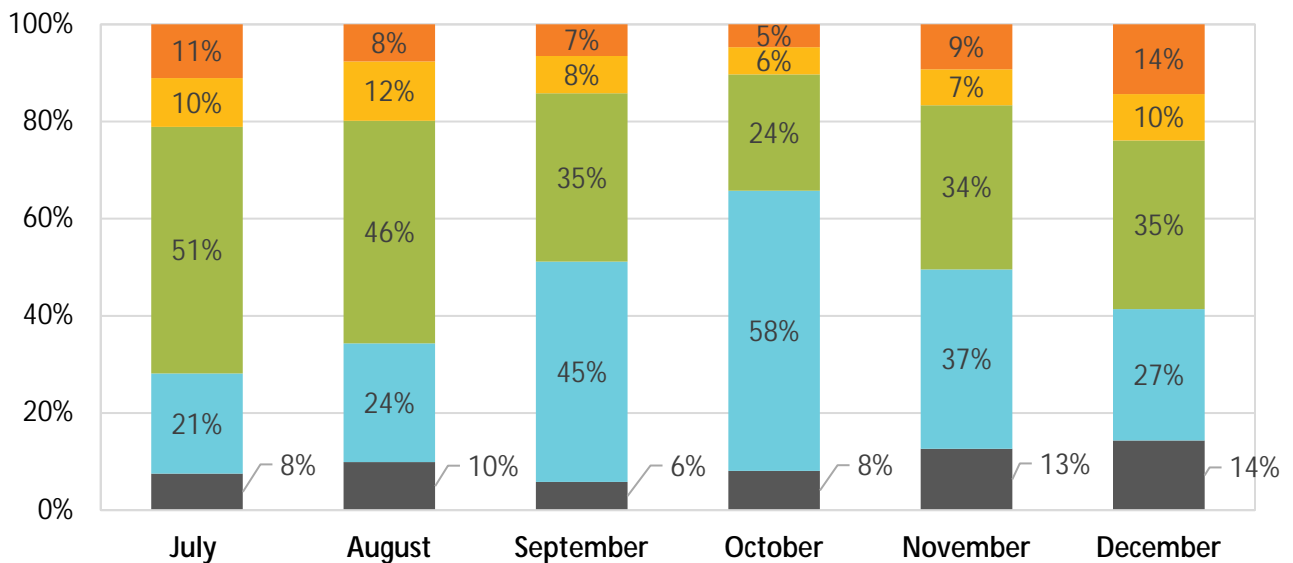


Figure 13. Proportion of Influenza Cases by Age Group and Episode Month, 2022-23 Fiscal Year-to-Date

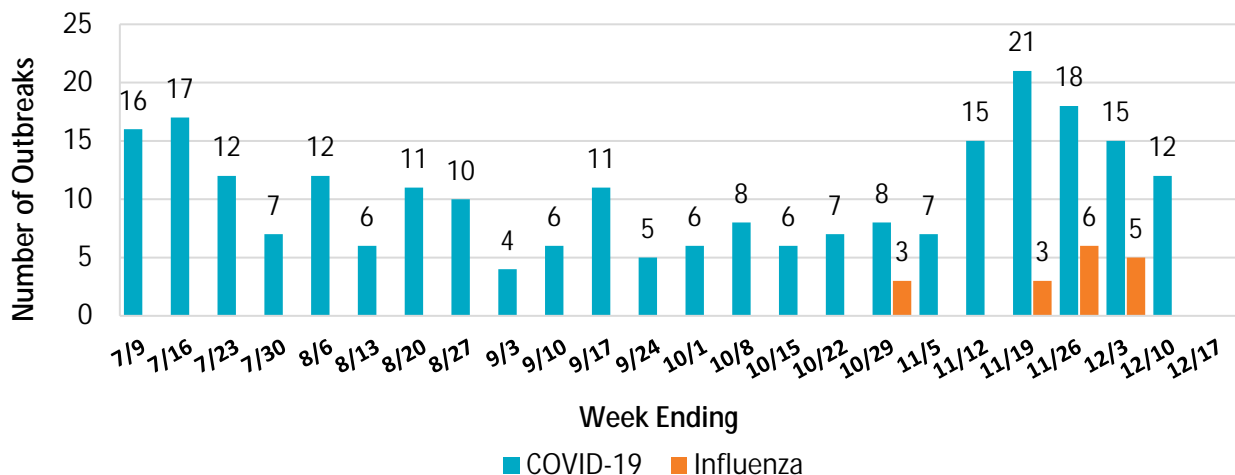






## COVID-19 and Influenza Outbreaks in Residential Congregate Settings\*

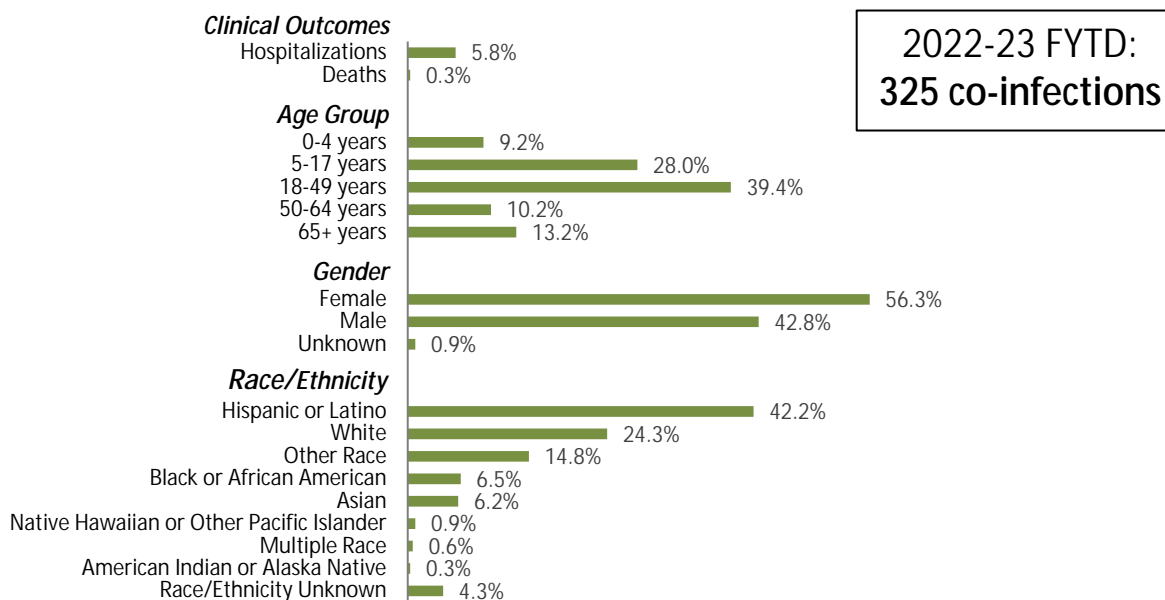
Figure 14. COVID-19 and Influenza Outbreaks by Week of Onset



\*Includes skilled nursing facilities, assisted living facilities, group homes, correctional facilities, homeless shelters.

## COVID-19 and Influenza Co-infections

Figure 15. Selected Characteristics of COVID-19 and Influenza Co-infections\*, 2022-23 Fiscal Year-to-Date



\*Co-infections are identified as any positive influenza tests and positive RT-PCR or antigen tests for SARS-CoV-2 (the causative agent of COVID-19) within one week of each other. There are 309 confirmed and 16 probable COVID-19 cases among the co-infections.



## COVID-19 and Influenza Deaths

Figure 16. COVID-19 Deaths by Fiscal Year

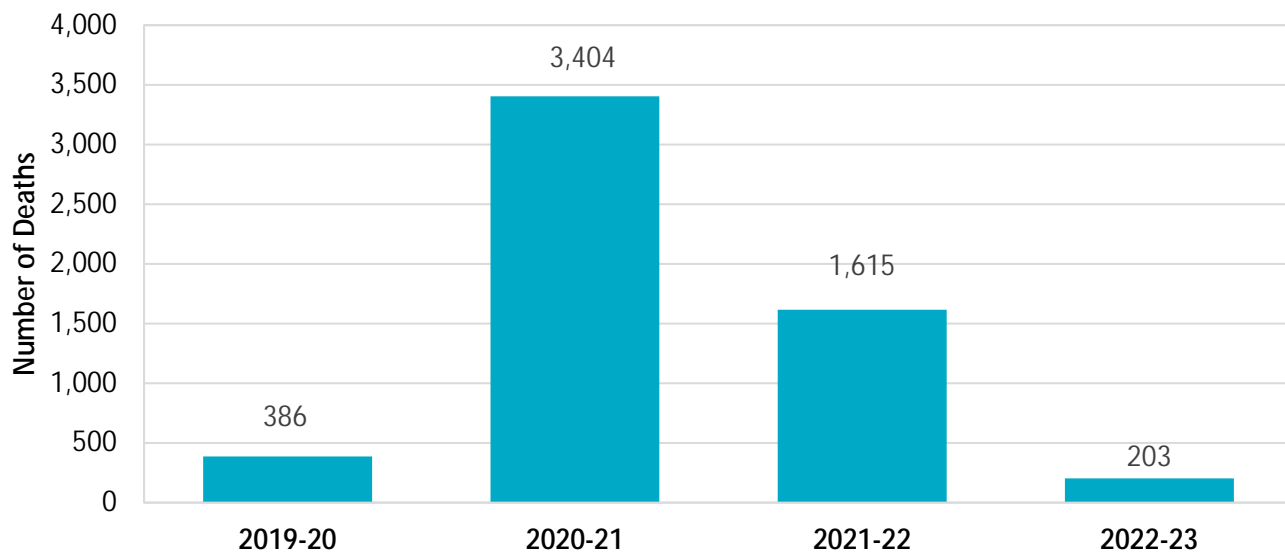
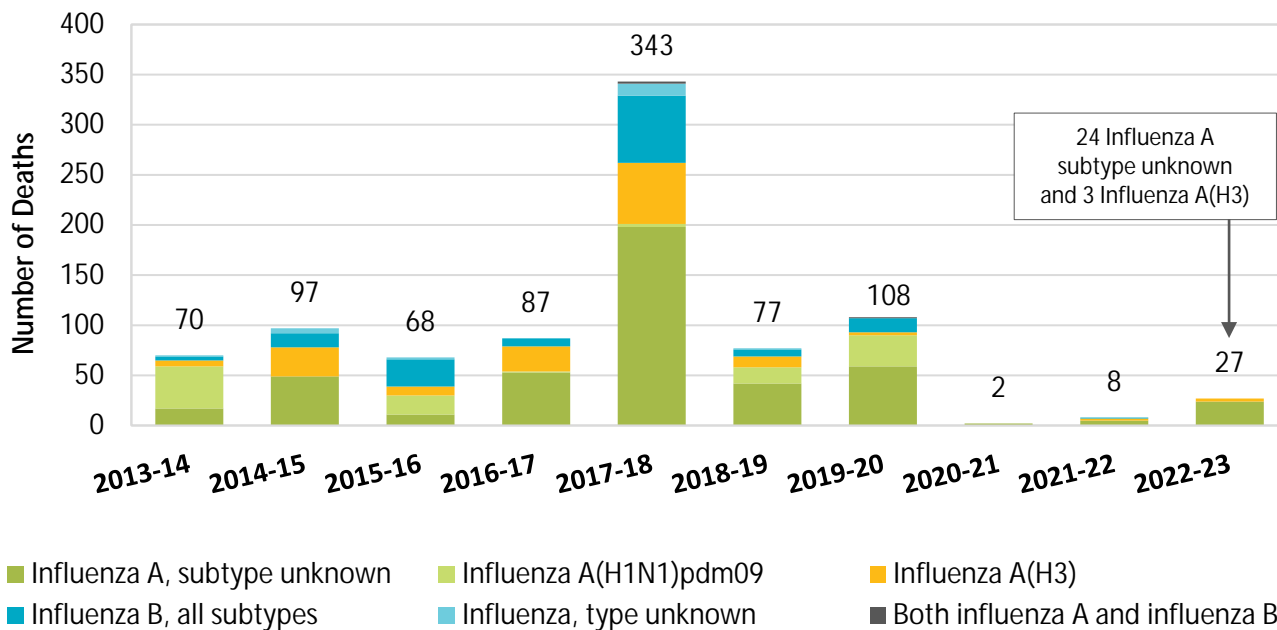


Figure 17. Influenza Deaths by Type and Fiscal Year



# Respiratory Virus Surveillance Report



Table 2. Summary of Deaths, Fiscal Year-to-Date

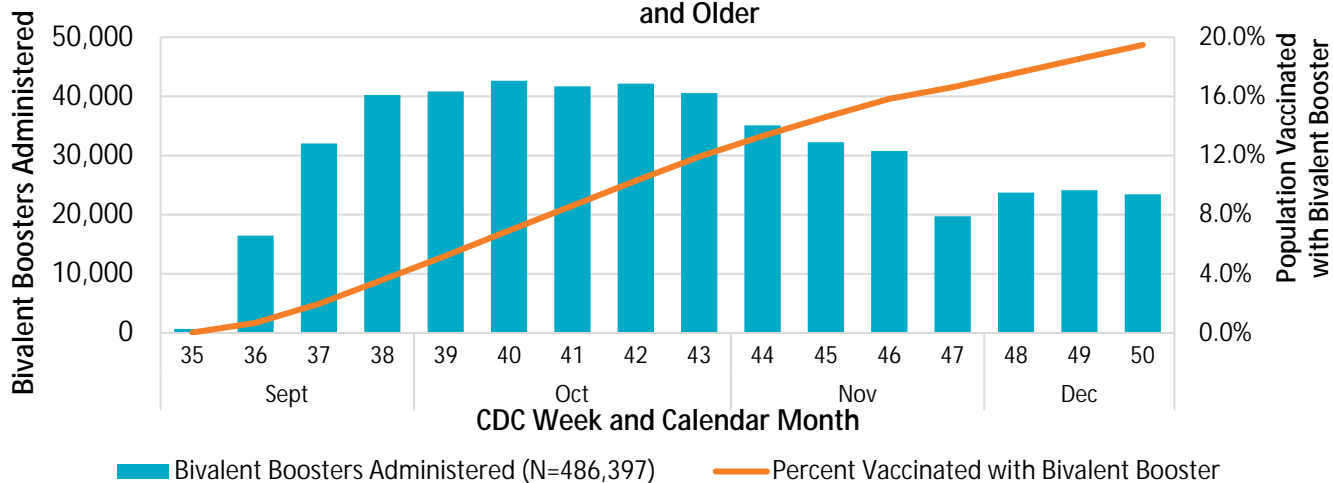
	COVID-19 Deaths	Influenza Deaths
<b>Age</b>		
0-4 years	0 (0.0%)	0 (0.0%)
5-17 years	0 (0.0%)	0 (0.0%)
18-49 years	7 (3.5%)	1 (3.7%)
50-64 years	25 (12.3%)	3 (11.1%)
65+ years	171 (84.2%)	23 (85.2%)
<b>Gender</b>		
Male	113 (55.7%)	11 (40.7%)
Female	90 (44.3%)	16 (59.3%)
<b>Race/Ethnicity</b>		
American Indian or Alaska Native	0 (0.0%)	0 (0.0%)
Asian	14 (7.0%)	1 (3.7%)
Black	9 (4.4%)	1 (3.7%)
Hispanic or Latino	38 (18.7%)	12 (44.4%)
Native Hawaiian or Other Pacific Islander	2 (1.0%)	0 (0.0%)
Other/Multiple Race	21 (10.3%)	1 (3.7%)
White	119 (58.6%)	12 (44.4%)
<b>Vaccinated*</b>	145 (71.4%)	8 (29.6%)
<b>Underlying Conditions</b>	193 (95.1%)	26 (96.3%)

\*Known to be vaccinated for influenza or at least primary series for COVID-19.



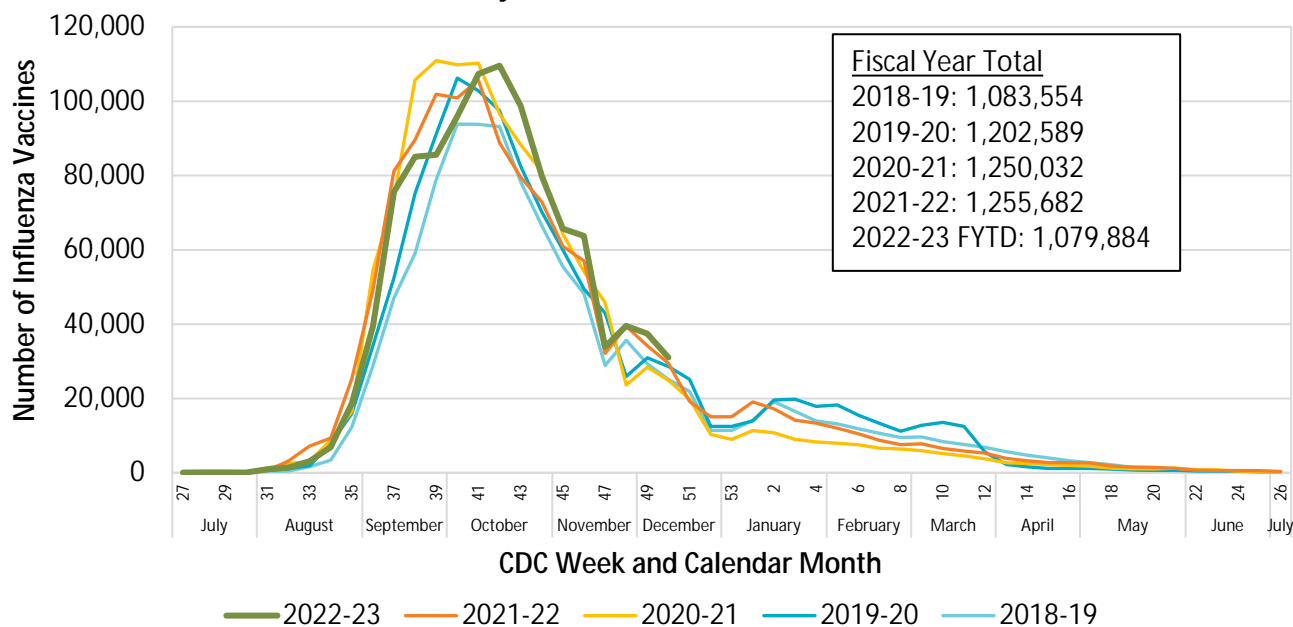
## Vaccinations Administered

**Figure 18. Number of COVID-19 Bivalent Boosters and Cumulative Percent of Persons Vaccinated With a Bivalent Booster, San Diego County Residents Age 5 Years and Older**



The bars show COVID-19 bivalent boosters administered, not individuals vaccinated. The line shows the percent of persons vaccinated with bivalent boosters per the dose and schedule regimen for the vaccine received. The bivalent vaccine was authorized for use in the United States in late August, so the data shown are since the bivalent vaccine became available.

**Figure 19. Number of Influenza Vaccinations Administered\* by CDC Week and Fiscal Year**

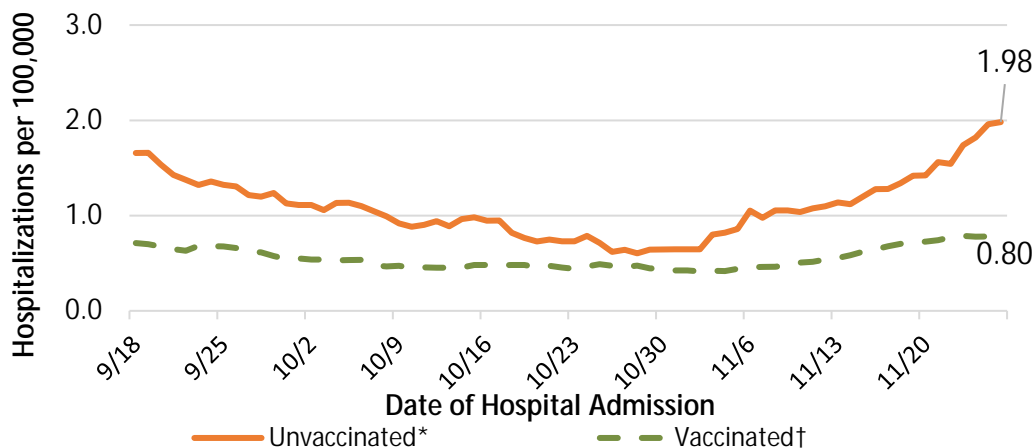


\*Week 52 data are repeated for week 53 for years that do not include week 53.



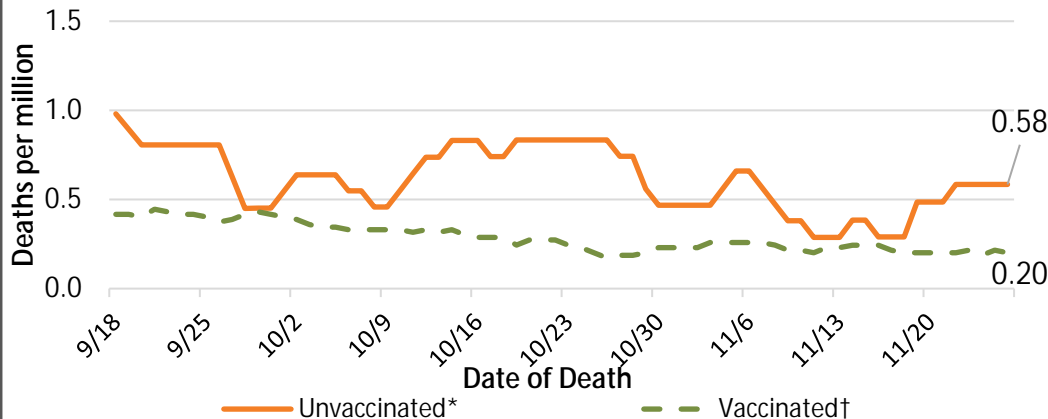
## COVID-19 Hospitalizations and Deaths by Vaccination Status

Figure 20. 14-Day Rolling Average COVID-19 Hospitalization Rate by Vaccination Status in San Diego County Residents Age 5 Years and Older in the Previous Three Months



Hospitalization rate for unvaccinated (1.98 per 100K) residents is **2.5 times higher** than vaccinated (0.80 per 100K) residents

Figure 21. 28-Day Rolling Average COVID-19 Death Rate by Vaccination Status in San Diego County Residents Age 5 Years and Older in the Previous Three Months



Death rate for unvaccinated (0.58 per million) residents is **2.9 times higher** than vaccinated (0.20 per million) residents

According to CDC, several factors likely affect crude case rates by vaccination and booster dose status, making interpretation of recent trends difficult. Limitations include higher prevalence of previous infection among the unvaccinated and un-boostered groups; difficulty in accounting for time since vaccination and waning protection; and possible differences in testing practices (such as at-home tests) and prevention behaviors by age and vaccination status.

\*An unvaccinated hospitalization or death is one that occurs in a person who has not received a COVID-19 vaccine. Partially vaccinated persons are excluded.

†A vaccinated hospitalization or death is one that occurs in a person who received at least two doses of a two-dose vaccine series (e.g., Pfizer, Moderna) or one dose of a one-dose series (e.g., Johnson & Johnson) at least 2 weeks before they tested positive for COVID-19. This includes persons who have received a monovalent or bivalent booster dose.

San Diego County Population from SANDAG 2019 Population Estimates (Prepared June 2020) for persons 5 years of age and older = 3,144,061. The vaccinated population for each day is the cumulative number of county residents 5 years of age and older documented to have received the final or booster dose of COVID-19 vaccine at least 14 days prior to that day. The unvaccinated population is the estimated county population 5 years of age and older minus the partially vaccinated, fully vaccinated, and boosted populations.

# Respiratory Virus Surveillance Report



## Wastewater Surveillance

Figure 22. SARS-CoV-2 Detection in Wastewater\*

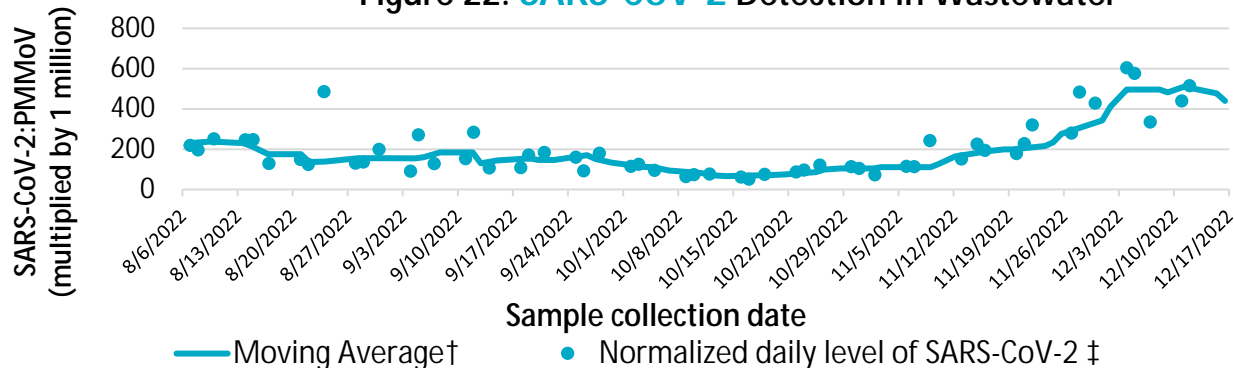


Figure 23. Influenza A<sup>s</sup> Detection in Wastewater\*

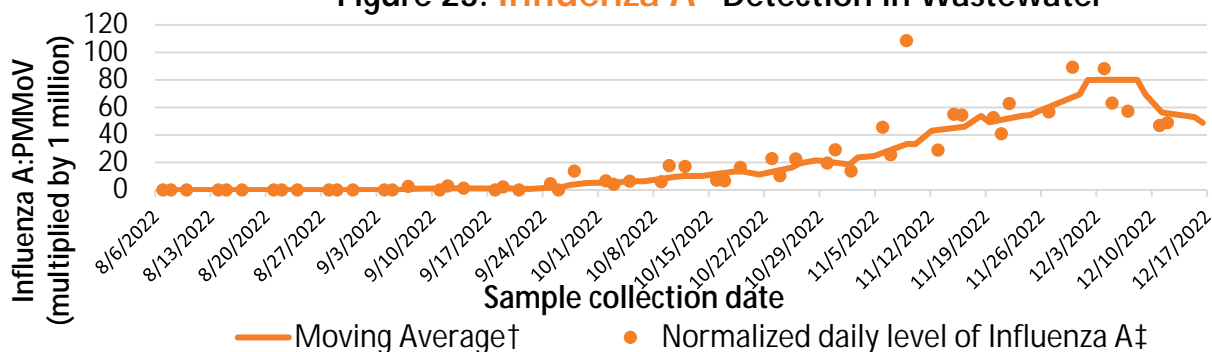
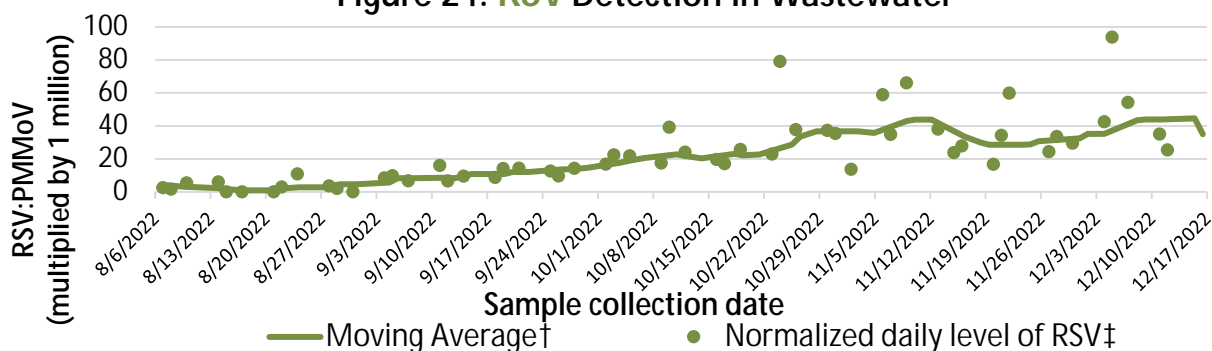


Figure 24. RSV Detection in Wastewater\*



Data provided by Wastewater SCAN: <https://wastewaterscan.org/>.

\*Recent WW samples were collected on days where SD county received significant precipitation. Rain can dilute and skew the measurement of pathogens in WW.

†Calculated by taking the average of the 5 samples centered around a date after excluding the highest and lowest values.

‡Data are normalized to a common, harmless plant virus that is consumed when people eat called pepper mild mottle virus (PMMoV).

§Detection of influenza in wastewater is specific to influenza A.

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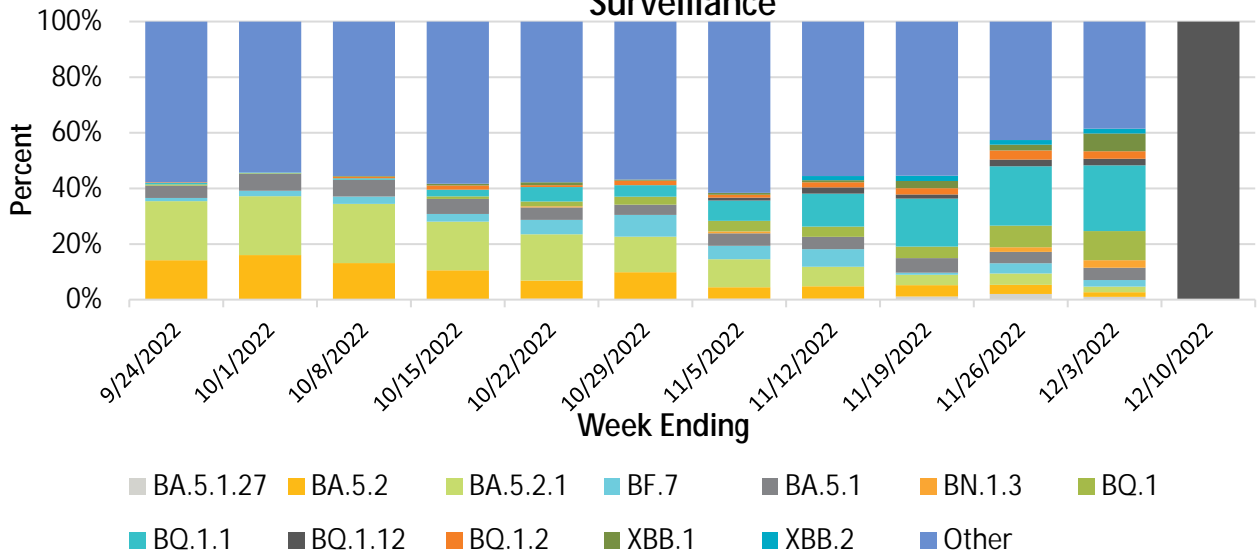
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# Respiratory Virus Surveillance Report



## COVID-19 Surveillance on Variants

Figure 25. SARS-CoV-2 Variant Prevalence from Genomic Surveillance

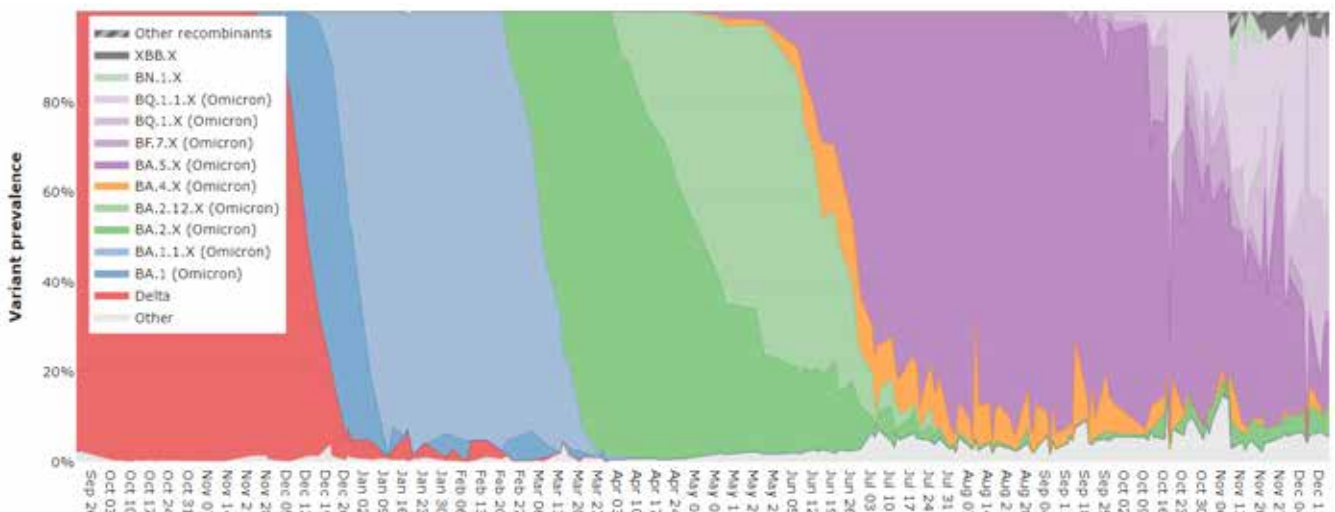


Variant calls for SARS-CoV-2 genomes generated from clinical samples were obtained from the CDPH COVIDNET dashboard and GISAID. Data was then filtered to only include samples from San Diego county within the past 3-months

(<https://testing.covid19.ca.gov/covidnet/>, <https://gisaid.org/>).

For some weeks, very limited specimens may have been tested and findings should be interpreted with caution.

Figure 26. SARS-CoV-2 Wastewater Lineage Prevalence Over Time in San Diego



Source: SARS-CoV-2 variant prevalence in wastewater was generated by the SEARCH consortia

(<https://searchcovid.info/dashboards/wastewater-surveillance/>).

Data through  
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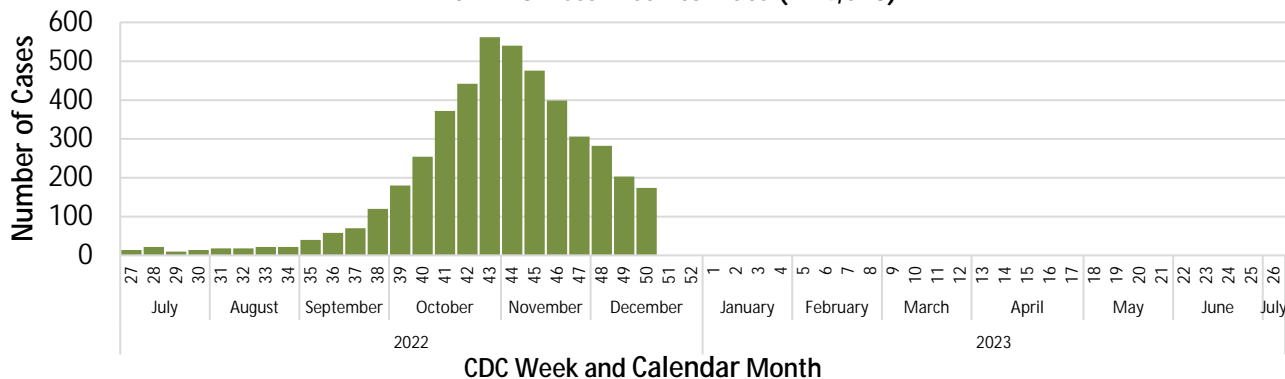
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# Respiratory Virus Surveillance Report



## Respiratory Syncytial Virus (RSV) Surveillance

Figure 27. San Diego County RSV Cases by CDC Episode Week\*, 2022-23 Fiscal Year-to-Date (N=4,618)



Results displayed were voluntarily reported by local San Diego County health systems. Reporting of RSV test results is not mandated. Interpretation of trends should be made with caution.

Figure 28. Proportion of RSV Cases by Age Group and Month, 2022-23 Fiscal Year-to-Date

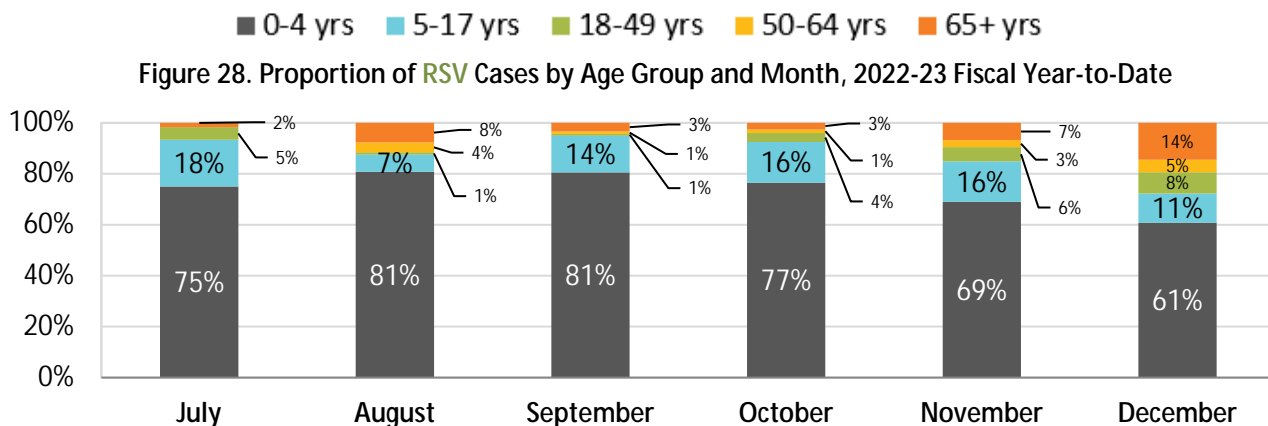
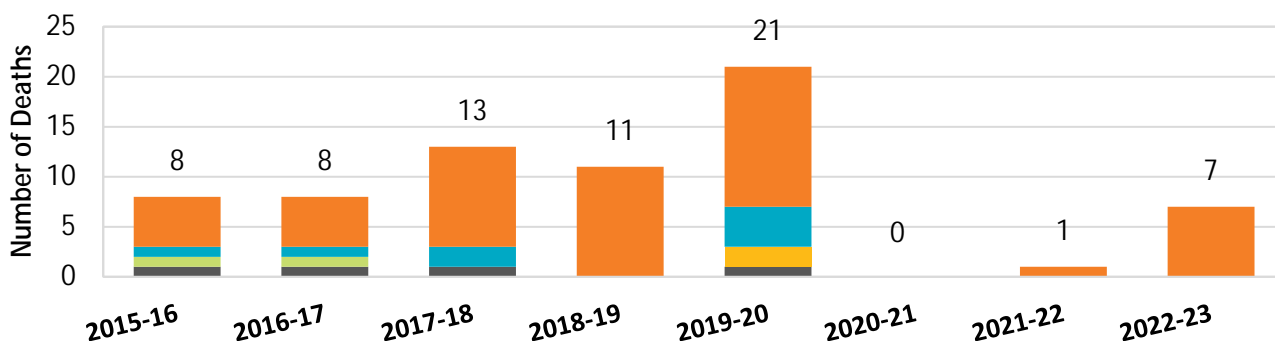


Figure 29. RSV Deaths\* by Age and Fiscal Year



\*These deaths are RSV-associated, defined as having final underlying cause of death International Classification of Diseases codes of J12.1 (RSV-pneumonia), J20.5 (RSV-bronchitis), or J21.0 (RSV-bronchiolitis), or RSV listed as an immediate cause of death or an other significant condition contributing to death on the death certificate.

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# Respiratory Virus Surveillance Report



The purpose of the weekly *Respiratory Virus Surveillance Report* is to summarize current COVID-19 and influenza surveillance in San Diego County. Additional COVID-19 and influenza data and resources and a link to subscribe to this report are available via the Epidemiology Unit [website](#).

*Data are preliminary and may change due to delayed reporting and additional information obtained during investigations.*

## COVID-19 Reporting in San Diego County

Facilities Certified Under CLIA to perform Non-waived Testing are required to report all laboratory-based SARS-CoV-2 NAAT results, including positive and non-positive (i.e., negative, indeterminate). Facilities with a CLIA Certificate of Waiver are required to report SARS-CoV-2 POSITIVE diagnostic results only. Laboratories that test San Diego County residents (regardless of the physical location of the laboratory) must register with CDPH for electronic laboratory reporting (ELR). Information about how to establish an electronic connection with CDPH to route positive and negative COVID-19 results to San Diego County can be found at the CDPH [Health Information Exchange Gateway](#). Laboratories waiting for ELR to be established are required to report laboratory-positive results to the County Epidemiology Unit by FAX at **(858) 715-6458**. Hospitalizations and deaths of patients due to COVID-19 must be reported within one day of identification using a [COVID-19 Confidential Morbidity Report Form](#).

**NOTE: Self-administered tests are not reported to the County of San Diego and are not included in COVID-19 data reporting.**

## Influenza Reporting in San Diego County

Individual influenza cases are reportable to the County of San Diego Epidemiology and Immunization Services Branch. Please report laboratory-positive influenza results to the County Epidemiology Unit by FAX **(858) 715-6458** using a [Confidential Morbidity Report Form](#), or an [Influenza Case Report Form](#), and/or a copy of the laboratory results. Also, please indicate if the patient died and/or is a resident of a congregate living facility (if known).

Influenza specimens may be sent to [Public Health Laboratory](#) (PHL) for confirmation and subtyping. Please contact PHL at **(619) 692-8500** before submitting or for questions and use the current PHL [Test Requisition Form](#). Contact the Epidemiology Unit by telephone **(619) 692-8499** or email ([EpiDiv.HHSA@sdcounty.ca.gov](mailto:EpiDiv.HHSA@sdcounty.ca.gov)) with questions about influenza data. Influenza outbreaks should be reported by telephone to **(619) 692-8499**.

## Resource Links

- § County of San Diego Epidemiology Unit [www.sdepi.org](http://www.sdepi.org)
- § County of San Diego [2021-22 Influenza Season Summary](#)
- § County of San Diego [COVID-19 Data website](#)
- § County of San Diego Immunization Unit (SDIZ) [www.sdiz.org](http://www.sdiz.org)
- § California [Immunization Registry](#) (CAIR2)
- § California Department of Public Health (CDPH) [COVID-19 Update](#)
- § California Department of Public Health (CDPH) [Influenza Update](#)
- § Centers for Disease Control and Prevention (CDC) [COVID-19 Surveillance](#)
- § Centers for Disease Control and Prevention (CDC) [Influenza Surveillance](#)

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## Data Sources and Definitions

- **Case reports:** Medical providers and laboratories report individual cases of PCR-confirmed and antigen-positive probable COVID-19 and individual cases of PCR and rapid or antigen test positive influenza via fax or electronic laboratory reporting (ELR) to Public Health Services Epidemiology Unit (Epidemiology). Self-administered tests are not reported. Respiratory syncytial virus (RSV) reporting is not mandated, but many San Diego County health systems voluntarily report positive RSV detections, primarily via ELR.
- **Deaths:** The County of San Diego requests that all deaths related to COVID-19 and influenza be reported for surveillance purposes. Pediatric flu deaths (under 18 years of age) are legally reportable in California. RSV deaths in children under age 5 are also legally reportable. COVID-19, RSV, and influenza-related deaths are also identified through death certificate registration. The County Office of Vital Records notifies Epidemiology when a new death is registered with COVID-19, RSV, or influenza listed as a cause of death or contributing condition. The Epidemiology Unit compiles the data, and only reports deaths that can be verified by a death certificate.
- **Percent pneumonia and influenza deaths:** The percentage of all deaths registered that had either pneumonia and/or influenza listed as a cause of death is obtained directly from the Vital Records data system on a weekly basis.
- **Emergency department syndromic surveillance:** Electronic emergency department data are reported to the Epidemiology Unit daily. The percent of ED visits for **influenza-like illness (ILI)** and **COVID-like illness (CLI)** based on chief complaints or diagnosis is calculated for each week. CLI is defined as fever and cough, shortness of breath, or difficulty breathing OR coronavirus diagnostic codes. ILI is defined as fever and cough and/or sore throat.
- **Outbreaks:** Outbreaks in residential congregate settings, such as skilled nursing facilities, assisted living facilities, group homes, correctional facilities, and homeless shelters, are included in this report. Epidemiology identifies outbreaks when facilities call to report. Other potential outbreaks are identified when multiple cases share an address or have a residential address that matches a skilled nursing or long-term care facility.
  - **COVID-19 outbreaks:**
    - Skilled Nursing Facilities: at least one facility-acquired case of laboratory-confirmed COVID-19 in a resident.
    - Non-SNF Residential Congregate Settings: At least three suspected, probable, or confirmed COVID-19 cases within a 14-day period in epidemiologically-linked residents and/or staff.
  - § **Influenza outbreaks:** In a congregate living setting, outbreaks are defined as at least one laboratory-confirmed influenza in the setting of a cluster ( $\geq 2$  cases) of influenza-like illness (ILI) within a 72-hour period.
- **Vaccinations:** Number of COVID-19 and influenza vaccinations registered in the California Immunization Registry (CAIR2) by participating providers. Some providers, including the VA, DoD, other military, some tribal, and prisons do not report to CAIR2.
- **Wastewater surveillance:** WastewaterSCAN, a national consortia, provides weekly monitoring for levels of SARS-CoV-2 and Influenza A in wastewater solids collected from the Point Loma processing plant.
- **Variant surveillance:** SARS-CoV-2 variant prevalence from genomic surveillance is based on clinical samples and is obtained from the California Department of Public Health COVIDNET (<https://testing.covid19.ca.gov/covidnet/>) dashboard and GISAIID (<https://gisaid.org/>). Wastewater SARS-CoV-2 lineage prevalence was generated by the SEARCH (San Diego Epidemiology and Research for COVID Health) consortia (<https://searchcovid.info/dashboards/wastewater-surveillance/>).
- **SANDAG population estimates, vintage 2019:** Rates are calculated using 2019 population estimates from the San Diego Association of Governments.